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MEMORANDUM FOR: THE RECORD

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Chief
Trade Branch
Soviet Economy Division
Office of Soviet Analysis

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THE USSR'S HARD CURRENCY PAYMENTS POSITION

Office of Soviet Analysis

8 March 1983

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The USSR's Hard Currency Payments Position

The USSR had considerable success in curbing the growth in its hard currency debt last year, following an increase of \$2.5 billion in 1981. Although its hard currency position is still relatively strong--the debt service ratio is less than 20 percent--Moscow did not take lightly the turnaround in its fortunes in 1981. A natural conservatism, heightened by the Polish example, has made Soviet financial planners wary of sharp increases in foreign debt. Moscow's success, however, has been purchased at a substantial cost, both in terms of increased exports for hard currency of goods needed for domestic use and for delivery to its allies and in terms of reduced imports of Western grain and capital goods.

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One of the serious problems facing the Soviet leadership in the 1980s is how to deal with prospective hard currency shortages which could limit access to imports at a time of increasing economic stringency at home. At least through the mid-1980s the USSR's hard currency prospects are poor. Not only are oil prices likely to remain soft, but revenues from other key export earners such as gas and, perhaps, gold and arms which are linked to oil prices, may also be effected. While we would expect energy prices to recover later in the decade, the USSR may not be in a strong position to benefit from a price turnaround because domestic oil production shortfalls could result in a large decline in oil exports and force the USSR to hold down imports paid for in hard currency or negotiate a growing volume of loans

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from the West. Hard currency imports play an important role in easing food shortages, raising energy production, sustaining technological advances and productivity, and making up for unexpected shortfalls of key products. If forced to reduce imports, the Soviets will then have to decide whether to concentrate such cuts on the non-agricultural or agricultural areas. Moscow will also face the choice of whether or not to further reduce subsidized sales of goods such as oil to Eastern Europe in order to keep up its own hard currency exports. 25X1

Developments During 1970-80

Throughout its history the USSR capitalized on its economic relations with the West to expand its economic base, raise the technological level of its industry, relieve industrial bottlenecks, increase domestic food supplies, and lessen the burden of defence. This policy reached its zenith in the early and mid-1970s as postwar productivity gains evaporated and Moscow turned to the West for equipment and technology to spur its industry and for grain to offset shortfalls in its inefficient farm sector. Expectations were similarly high in the West, where businessmen hoped to sell equipment and technology from underemployed capital goods industries and to develop a large and growing market in the USSR for consumer goods. The Politburo's decision to give full support to the Brezhnev program for upgrading the Soviet diet was an added sign that more attention would be given to the consumer, which would in turn require large Soviet imports of Western agricultural goods. For its part, the West viewed the USSR as an important new source of energy

supplies as well as a supplier of timber, various ores and metals, diamonds, and other raw materials.

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Because of increasing reliance on the West for equipment and grain, the USSR incurred large trade deficits in the mid-1970s. Concern over these deficits and the rapidly rising hard currency debt led Moscow in 1977 to begin to limit growth in imports from the West. The main impact was on imports of machinery and equipment, which in real terms fell an estimated 20 percent in 1977-80 (see Appendix Table 1). While Moscow was greatly aided in its efforts to narrow the trade gap by good harvests in 1977-78, which permitted a reduction in agricultural imports, the dominant factor was spiraling world oil prices in 1979-80, which produced large increments in the value of oil exports in spite of falling volume. Between 1978 and 1980, for example, nearly two-thirds of the \$10-billion rise in hard currency commodity export earnings was due to increased prices for oil (see Appendix Table 2). With these trends in the trade accounts, by 1979-80 the hard currency trade deficit had dropped to \$2.3 billion a year on average, compared with \$5.8 billion a year in 1975-76.

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Since the mid-1970s, sizable earnings from sales of gold and arms have permitted the USSR to hold down its use of Western credits, while earnings from interest on Soviet assets in Western banks and from invisibles and transfers have usually offset interest payments on the debt. Gold traditionally has ranked as one of the USSR's top hard currency earners, with cumulative receipts in the 1970s netting Moscow \$15 billion--an amount equal to about 10 percent of Soviet hard currency outlays in the

decade. The USSR has a gold inventory of about 2,000 tons, worth some \$30 billion at the late February 1983 price of about \$475 per ounce. Beginning in the early 1970s the USSR became a major supplier of military equipment to the less developed countries, mainly the Arab countries.

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Borrowing required to cover Soviet deficits pushed the net hard currency debt up from \$600 million at the end of 1971 to \$10.2 billion at the end of 1975. A determined campaign to curb the rise in net debt resulted in a drop to \$9.6 billion by the end of 1980. About three-fifths of the increase in the USSR's gross debt since 1971 originated in private borrowing from commercial banks and other commercial sources. Much of the increase in the Soviet commercial debt in the mid-1970s was the result of large syndicated general purpose loans. Because of its wish to hold down its debt and avoid prevailing high interest rates, the USSR has not engaged in such borrowing since 1979, when it consolidated earlier syndicated loans into one large credit.

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Soviet debt on Western official and officially-backed credits--which since 1976 has grown more rapidly than debt arising from commercial credits--accounts for two-fifths of total gross debt. Since the USSR began large purchases of Western technology in the early 1970s, Moscow has used official and officially-backed credits to finance one-third of its imports of plant, equipment, and large diameter pipe from the West. Annual Soviet drawings on government-backed credits jumped from an average of \$475 million in 1971-73 to nearly \$2 billion by 1975

but have been held at an average of about \$2.5 billion a year since 1978. The volume of new commitments fell from a peak of nearly \$4 billion in 1976 to less than \$2 billion in 1980, reflecting falling Soviet orders for Western machinery and equipment (see Appendix Table 3). Subsidized interest rates and the long maturities attached to most government-backed credits have helped Moscow conserve considerable scarce hard currency.

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When all of the line items are added up and net financing received is taken into account, the identified receipts of hard currency exceed identified expenditures (by an average of \$4.2 billion in 1980-82). This calculated residual, "errors and omissions", in most years implies that we have not taken into account all Soviet hard currency outlays. Apart from the likelihood that estimating errors are substantial, the residual reflects the exclusion from the accounts (because of substantial information gaps) of the USSR's:

- (a) hard currency assistance to other Communist countries,
- (b) net outlays in hard currency trade with the other Communist countries,
- (c) net credits granted to LDCs to finance Soviet sales of machinery and equipment, including military equipment,
- (d) net credits--mainly short term--provided to the developed West to finance sales of oil and other commodities, and
- (e) hard currency expenditures in support of Communist parties and terrorist activities in the West.

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Weakening and Retrenchment in 1981-82

The Payments Position Weakens

After holding its hard currency debt down in 1977-80, the USSR was hit in 1981 by a soaring agricultural import bill, soft oil prices in the West, and the need to provide hard currency assistance to Poland. The deficit on merchandise trade rose to \$4 billion, compared with \$2.5 billion in 1980 (see Table 1). The gap would have been even higher had Moscow not pushed exports--mainly oil--and trimmed imports--mainly machinery and equipment--in the last half of 1981. The value of machinery imports fell by 25 percent for the year, while imports of steel other than pipe dropped by 10 percent, and purchases of chemicals leveled off. In real terms, the cutbacks were even larger. At the same time, however, imports of agricultural goods increased by more than one-third--to \$11.7 billion--and pipe imports rose by more than one-fifth.

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The unfavorable developments in the first half of 1981 forced Moscow to draw down its assets in Western banks by an unprecedented \$5 billion. To ease its financial situation and rebuild its assets, the USSR borrowed heavily--mainly on short-term credits for grain--and sold substantial amounts of gold in the second half of the year. By the end of the year, assets were back up to \$8.4 billion and the gross hard currency debt had climbed to nearly \$21 billion (see Table 2).

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Table 1
USSR: Estimated Hard Currency Balance of Payments

(Millions of current US dollars)

	1970	1975	1976	1977	1978	1979	1980	1981	1982 ¹
Current account balance	260	-4,607	-3,216	462	422	2,178	1,904	-100	2,600
Trade balance	-560	-6,297	-5,253	-2,942	-3,690	-2,018	-2,486	-4,000	-1,500
Exports, f.o.b.	2,424	8,280	10,225	11,863	13,336	19,417	23,584	23,778	26,000
Imports, f.o.b.	2,984	14,577	15,478	14,805	17,026	21,435	26,070	27,778	27,500
Additional military deliveries to LDCs, f.o.b. ²	400	1,500	1,850	3,220	3,965	3,855	4,200	4,200	4,500
Net interest	-80	-570	-724	-848	-881	-799	-710	-1,300	-1,500
Other invisibles and transfers	500	760	911	1,032	1,028	1,140	900	1,000	1,100
Capital account balance	Neg1.	6,522	3,888	2,830	1,734	338	1,628	5,940	800
Gross drawings ³	NA	6,371	5,495	2,857	3,096	4,474	2,865	6,300	3,100
Government-backed	450	1,972	2,450	1,991	2,565	2,410	2,195	2,100	2,800
Commercial	NA	4,399	3,045	866	531	2,064	670	4,200	300
Repayments	NA	969	1,365	1,955	2,332	2,800	3,051	3,200	3,400
Government-backed	160	730	1,035	1,285	1,456	1,702	1,915	2,000	2,100
Commercial	NA	239	330	670	876	1,098	1,136	1,200	1,300
Net change in assets held in Western banks	NA	-395	1,611	-310	1,552	2,826	-234	-140	0
Gold sales	Neg1.	725	1,369	1,618	2,522	1,490	1,580	2,700	1,100
Net errors and omissions ⁴	NA	-1,915	-672	-3,292	-2,156	-2,516	-3,532	-5,840	-3,400

¹ Provisional estimate.

² This item excludes the value of arms related commercial exports included in the reporting on Soviet exports to individual LDCs. It is based on the reported export residuals in Soviet/LDC published trade figures (i.e., the difference between Soviet reported exports to the LDCs and Soviet reporting on exports to individual LDCs). These figures were reduced by the estimated value of Soviet exports of major arms systems to non-hard currency paying LDCs on a f.o.b. basis. The estimates also excludes the value of follow-on services, which may be substantial.

³ Including additions to short-term debt.

⁴ Reflects hard currency assistance to other Communist countries; hard currency trade with other Communist countries; hard currency credits to LDCs to finance Soviet sales of machinery and equipment (including military equipment); and credits to developed Western countries to finance sales of oil and other commodities as well as errors in other line items of the accounts.

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Table 2

USSR: Estimated Hard Currency Debt to the West

(Millions US Dollars, Yearend)

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u> ¹
Gross debt	10,577	14,707	15,609	16,373	18,047	17,861	20,900	20,600
Commercial debt	6,947	9,662	9,858	9,513	10,479	10,013	13,000	12,000
Government and government backed debt	3,630	5,045	5,751	6,860	7,568	7,848	7,900	8,600
Assets in Western banks	3,127	4,738	4,428	5,980	8,806	8,572	8,430	8,400
Net debt	7,450	9,969	11,181	10,393	9,241	9,289	12,470	12,200

¹ Provisional estimate.

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Reaction in 1982

Moscow continued its efforts to improve its payments position into 1982. By strongly pushing oil exports and holding down imports, the USSR slashed its January-September hard currency trade deficit to \$1.5 billion, less than a third of the \$5.2-billion deficit incurred in January-September 1981. Exports were 20 percent above the level in the comparable period of the previous year. About two-thirds of the \$3-billion rise in merchandise exports came from the sharp jump in oil sales; much of the rest was the result of increased sales (perhaps arms) to Iraq. A more than 50-percent rise in the volume of oil sales to hard currency countries far outweighed the roughly 5-percent drop in prices paid for Soviet oil.

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In January-September 1982, the Soviets reduced imports by 2 percent compared with the comparable period in 1981 by paring

purchases of Western grain, chemicals, and non-tubular steel. Compared with a year earlier, grain shipments to the USSR (including flour) from the West fell off by 1 million tons to 28 million tons. Average prices paid for grain declined by roughly 15 percent with the monthly volume shipped dropping off substantially after May. The estimated volume of agricultural imports other than grain increased substantially, on the other hand, mainly due to a sharp rise in purchases of Western sugar. Most if not all of the rise in the volume of these imports, however, was offset by lower prices. Western trade data suggest that purchases of chemicals and of steel other than pipe fell, whereas purchases of Western steel pipe rose substantially as Japan and West Germany began deliveries for the Siberia-to-Western Europe gas pipeline. Sketchy Western trade data indicate that imports of machinery and equipment--which in real terms fell two-fifths in 1977-81--may have picked up substantially.

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Real oil exports in 1982 for hard currency probably were 200,000 b/d or more higher than the 920,000 b/d the USSR exported to hard currency customers in 1981. Even with prices about 5 percent below the 1981 level, the Soviets should realize a pronounced increase in oil earnings, and total hard currency merchandise exports for the year could be on the order of \$26 billion, or \$2.2 billion more than in 1981. Meanwhile, imports probably continued to stagnate in the last quarter of 1982. For the entire year imports of Western grain amounted to an estimated 36 million tons compared with 39 million tons in calendar year

1981. Total hard currency imports probably were about \$27.5 billion, \$300 million less than in 1981.

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The 1982 hard currency trade deficit, therefore, probably was \$1.5 billion or less, about one-third the amount incurred in 1981. Soviet trade data for January-September indicate that deliveries of arms to the hard currency LDCs were up somewhat. The improvement in the trade picture should have allowed the USSR to realize a current account surplus of more than \$2.5 billion, up from a small deficit in 1981. In addition, the Soviets may have earned about \$1.1 billion from sales of perhaps 100 tons of gold.

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The improvement in its current account position coupled with a probable fall in hard currency assistance to Poland--which may have totaled as much as \$1 billion in 1981--probably allowed Moscow to reduce its debt somewhat in 1982. By the end of 1982 the gross hard currency debt fell by an estimated \$300 million, to \$20.6 billion. The amount outstanding on Western government-backed credits is expected to rise by \$700 million to \$8.6 billion as deliveries of pipe and equipment for the Siberia-to-Europe pipeline begin. From BIS data for January-June, we estimate that the USSR's commercial debt declined by roughly \$1 billion to \$12 billion by yearend. All of this decline probably occurred in the short-term debt. Drawings on medium- and long-term bank credits are estimated at \$1.3 billion or about the same as repayments. Moscow's assets in Western banks--which fell by \$1.8 billion in January-June before rising nearly \$800 million in

July-September--probably approached the \$8.4 billion end-1981 level by yearend 1982.

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The Cost to Moscow

Moscow has had to pay a substantial price for the improvement in its hard currency position. The increase in oil exports for hard currency was achieved only by cutting back exports to Eastern Europe and holding down Soviet domestic oil consumption and/or dipping into oil reserves. In late 1981 the USSR decided to reduce--perhaps by 10 percent--its highly subsidized exports of crude oil to Czechoslovakia, East Germany, and Hungary. (Originally Moscow had promised to maintain oil exports to its East European allies at the 1980 level through 1985.) At the same time, Poland apparently reduced its imports of oil--especially of products--from the USSR because of reduced requirements due to the fact that Polish industrial plant was operating way below capacity. Thus, a major share of the 1982 increase in oil exports to hard currency countries came from the reduction in exports to Eastern Europe. In addition, the Soviets are believed to have picked up oil imports; purchases of Libyan crude oil rose by about 60,000 b/d in the first nine months of the year.

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Since Soviet oil production increased by only 70,000 barrels/day in 1982, the approximate leveling off of total net oil exports implies either very little growth--perhaps on the order of 0.5 percent--in domestic oil consumption or a drawdown of oil stocks. Because of the frequency of reports of fuel shortages in the USSR in the past few years, we believe that

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inventories have been taut. If domestic oil consumption did grow by less than 1 percent in 1982, the USSR probably found it exceedingly difficult to obtain the 2.2 percent rise in industrial production and the increase in GNP realized for the year without making remarkable strides in conservation or interfuel substitution, or both. We do not believe, however, that the Soviets made such strides in such a short period. On the contrary, regime attempts to impose conservation through rationing very likely held down production in industry and other sectors of the economy.

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In addition, Moscow has forgone substantial imports of grain and nonagricultural commodities. Imports of machinery and equipment declined in volume by more than 40 percent in 1977-81. Continued import cuts clearly would interfere with regime efforts to improve productivity. The USSR's apparent decision to limit imports of grain will be felt by the Soviet consumer in terms of per capita availability of meat and dairy products.

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Balance of Payments Prospects

In spite of the substantial help the USSR received from hard currency imports in the 1970s, a poor outlook for Soviet exports suggests that the USSR will be compelled to limit severely the growth of hard currency imports in the 1980s. While the USSR could obtain some additional relief by further tightening the screws on Eastern Europe, as it did last year with oil, such a course would be politically difficult for Moscow given the economic problems already confronting that area. In limiting or cutting imports, Moscow faces hard decisions regarding who at

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home should bear the burden--the Soviet consumer, the partisans for more investment, or industrial managers who need intermediate materials such as steel and chemical feedstocks.

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Export Trends in the 1980s

The improvement in Soviet hard currency oil exports recorded in 1982 probably will not last long -- perhaps not even into 1983. Production of 12.25 billion b/d last year was only 0.7 percent above the level in 1981. Output is expected to show little if any growth through mid-decade before starting to decline. The ability of East European or Soviet consumers to absorb further cuts in oil supplies is one of the critical factors determining the level to which oil revenues will fall. Although Moscow probably has given some thought to making further cuts in oil deliveries to Eastern Europe, it apparently is holding off for the time being. Additional cutbacks in deliveries of Soviet oil would be a blow to the East Europeans, who could ill afford to buy oil on the world market or from the Soviets for hard currency. Attempts to hold down oil consumption within the Soviet Union also are likely to fall short of plans, especially since extensive substitution and conservation depend on large investments.

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Natural gas offers the only hope for sharply increased Soviet exports over the next few years. Deliveries through the Siberia-to-Western Europe gas pipeline now under construction should begin on a small scale by 1984, and the line could be operating near full capacity a couple of years later. The sharp increase expected in earnings from natural gas exports, however,

probably will fall short in real terms of covering the decline in oil exports, even if Western demand is higher than we now foresee. At this point, we are projecting gas exports at 8 billion cubic meters below the full capacity of some 60 billion cubic meters of existing lines and the new export line. However, although the Soviets have their hands full for the time being juggling construction schedules of the Siberia-to-Western Europe and other domestic gas pipelines, they would certainly agree to build a second or even a third line if they felt the West Europeans would buy more gas.

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Commodity exports other than oil, gas, and gold, meanwhile, are likely to show little if any early growth. Of the thousands of products and services on the Soviet export list, only a few offer much chance for increased hard currency earnings during the 1980s. In a series of industries (for example, nonferrous metals and timber) domestic production is stagnating and domestic requirements are still rising, squeezing the exportable surplus. Platinum-group metals, nickel, and chemical fertilizer offer the greatest opportunities for export expansion. Chances are poor that the Soviets will be able to boost their hard currency earnings from sales of machinery. Sales of timber, diamonds, and cotton are expected to remain substantial but not to increase much.

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We calculate that earnings from exports other than oil, gas, arms, or gold could increase at best by roughly 4 percent a year in real terms. Even this estimate, which is far from optimistic, assumes that Soviet planners are willing and able to increase

investment and allocations of labor in order to sustain an export push on a broad front. It also assumes that Western demand will be robust enough to accommodate a large volume of Soviet sales. Because of these factors, we believe a more realistic rate for the volume of these exports is more likely to be closer to 0 to 2 percent per year. Although Moscow could step up gold sales--it could sell about 300 tons a year without dipping into reserves--it would have to be careful not to push too hard on the market, with the consequent effect on prices.

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The outlook for Soviet export earnings is colored in the short term by weakness in Western markets. World oil prices may well drop further this year and remain soft for another year or two. If, for example, OPEC oil prices drop by another \$5 a barrel, the USSR's 1983 hard currency earnings from oil sales could be reduced by about \$2.2 billion. Moreover, a sharp drop in oil prices could also impact severely on Soviet earnings from other sources. It could lead to lower prices for gas and, perhaps, for gold. Perhaps more important, Moscow may earn less hard currency from arms sales because of large declines in oil earnings in the Middle East. The lower the price of oil, the less hard currency potential arms recipients will have. A pickup in the prices of nonenergy exports--which on average have declined by roughly half a billion dollars a year.

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Beyond mid-decade, oil prices could begin to rise again, once more yielding windfall profits for the USSR. Increased oil revenues might also help the Middle East countries to increase their purchases of Soviet arms for hard currency. A spurt in

Soviet oil earnings probably would much more than offset the likely slowdown in Western demand for Soviet nonenergy commodity exports due to increased competition from LDCs and newly industrialized countries.

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Hard Currency Projections

At this time, we foresee little if any increase in real value of the USSR's hard currency purchasing power through 1990. Much depends on oil price trends, however. A great deal more uncertainty attaches to our estimates for the second half of the decade than to those for the next three years.

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We have made some projections on the basis of our estimates of Soviet export capabilities to suggest the magnitude of the hard currency constraints facing the USSR through the rest of the decade. With the help of a series of standard accounting identities, we have calculated payments trends in Soviet financing requirements on the basis of specified values for key earnings items such as the volume and price of oil and gas exports and sales of arms and gold.

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The key unknown in the calculation is, of course, Soviet oil exports, which we have projected to decline annually by 70,000 b/d to some 500,000 b/d in 1990, almost half the 1982 level. Because of soft demand in Western Europe for oil, nominal prices are projected to fall in 1983, level off in 1984, and rise with the rate of inflation for the rest of the decade. Gas exports, on the other hand, are expected to rise to 32 BCM by 1985 and to

Text Table

**Assumptions Underlying Hard Currency
Balance of Payments Projections**

Oil exports rise to 1.1 million b/d in 1982 and decline by 70,000 b/d in 1983-90.

Gas exports from existing pipelines drop from 28.8 BCM a year in 1981-83 to 25.5 BCM a year in 1984-90. Deliveries through the Siberia-to-Western Europe pipeline rise from 3 BCM in 1984 to 26.6 BCM by 1990.

Real non-oil, non-gas exports grow by 1 percent a year in 1983-90.

Real arms sales are held constant in 1982-90.

Real net earnings from invisibles (excluding interest) grow by 5 percent a year in 1983-90.

Gold sales drop from 200 tons in 1981 to 100 tons in 1982 and then (a) remain at 100 tons a year or (b) rise as high as 300 tons a year in 1983-90 depending on the need for such sales.

Real imports are (a) held constant or (b) allowed to rise 2 percent a year in 1983-90.

Real unrecorded expenditures (errors and omissions) are held constant at \$3.5 billion in 1983-90.

Nominal oil prices drop from \$35.20 a barrel in 1982, \$32.80 in 1983-84 and then rises with the rate of inflation.

Nominal gas prices for gas piped through existing lines drop from \$137.13 to \$145.80 in 1982 in 1983 before rising to \$166.95 in 1984 and \$198.35 in 1985, it then rises with the rate of inflation. The nominal price of gas going through the new Siberia-to-Western Europe pipeline starts at \$186.39 per thousand cubic meters in 1984 and then rises with the rate of inflation.

The nominal gold price rises from \$356 a troy ounce in 1982 to \$394 in 1983 and then rises with the rate of inflation.

The overall annual inflation rate applying to all other trade is 5 percent in 1983 and 7 percent in 1984-90.

Drawings on non-pipeline Western government-backed credits are held at \$2 billion a year in real terms in 1983-90.

Drawings on credits for the pipeline are \$800 million in 1982, \$2.5 billion in 1983, \$1.7 billion in 1984, and \$1 billion in 1985.

Nominal short-term commercial debt remains at the estimated 1982 level of \$5.0 billion.

Drawings on commercial medium-and long-term credits vary so as to fill the annual financial gap.

Interest rates run at an average annual rate of about 11 percent.

The average maturity structure is eight years on non-pipeline official credits, eleven years (with a 3-year grace period) on credits for pipeline equipment, and five years on medium- and long-term commercial credits.

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52 BCM by 1990 as gas sales to Western Europe rise. We allow for the nominal price of gas, meanwhile, to increase by 27 percent as contracts under the Siberia-to-Western Europe pipeline start to be filled and then rise with the rate of inflation. In all, the gas project will add an average of about \$6.4 billion annually in nominal terms to Soviet hard currency earnings in 1987-90. Nominal earnings from oil exports, however, will be about \$9 billion a year lower on average than if the volume of oil exports had remained at the 1982 level.

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In our calculations the volume of projected gas sales is set equal to the amounts (1) currently contracted for through existing lines and (2) likely purchases through the new export line. In fact, the USSR probably could sell substantially more gas than this should European customers seek additional supplies. The USSR has roughly 10 BCM of surplus capacity available now in existing lines, and could increase this amount markedly by adding to Czechoslovakian transit capacity.

As noted earlier, commodity exports other than energy, arms, and gold are allowed to rise by roughly 1 percent a year in real terms from their 1982 level of \$8.3 billion. If anything, even this assumption may be too optimistic. The volume of these exports in 1980 was lower than in 1978, and further slippage occurred in 1981. The volume of exports of wood and wood products fell by more than half between 1976 and 1981. Real exports of machinery and equipment leveled off in 1979-81, and sales of ferrous metals and agricultural products fell sharply in 1978-81.

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Given our assumptions regarding the volume and relative prices of the USSR's hard currency exports--and assuming annual gold sales of 300 tons--Soviet hard currency purchasing power would at best remain level through 1990, as shown in the following tabulation in which nominal earnings have been deflated by the assumed rise in import prices--5 percent in 1983 and 7 percent per year thereafter.

	<u>1982</u>	<u>1985</u>	<u>1990</u>
Merchandise exports	26.0	22.8	22.9
Additional arms sales ^a	4.5	4.5	4.5
Gold sales	1.1	3.6	3.6
Invisibles	1.8	2.0	2.4
Total	<u>33.4</u>	<u>32.9</u>	<u>33.4</u>

^a Sales not included in reported exports to hard currency countries.

Using these assumptions, we estimated financing requirements to (a) maintain the volume of imports at the 1982 level and (b) increase import volume by 2 percent per year in 1983-90. As shown in Table 3, the USSR's debt remains quite manageable through 1985 in both cases and debt through 1990 in the case where real imports are held constant.

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Table 3

USSR: Hard Currency Financing Requirements
Under Alternative Scenarios

(Billion current US dollars)

	<u>1982</u>	<u>Real Imports Constant</u>		<u>Real Imports Grow by</u>	
		<u>1985</u>	<u>1990</u>	<u>2 Percent</u>	<u>Per Year</u>
				<u>1985</u>	<u>1990</u>
Total exports	26.0	27.4	38.6	27.4	38.6
Total imports	27.5	33.1	46.4	36.3	54.1
Gold sales	1.1	2.9	4.1	4.3	6.1
Net credits drawn	-0.3	2.6	3.4	5.0	12.5
Net debt	12.2	16.3	22.9	21.5	53.9
Debt service ratio (percent)	17.3	18.5	21.5	21.0	38.2

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Our projections are highly sensitive to the volumes of oil, gas, and gold sold. Each additional 100,000 b/d of oil sold increases annual purchasing power by an average of roughly \$1 billion a year using the real prices we have assumed. Each additional billion cubic meters of natural gas sold would yield about \$165 million in real terms. And for each additional 50 tons of gold sold, real hard currency receipts will rise by \$575 million.

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Finally, we have assumed that export prices--except for oil, gas, and gold as noted above--and import prices move together. Because of the decline in real oil, gas, and gold prices in 1983, Soviet terms of trade deteriorate in that year but improve in 1984-85 due to the rise in real gas prices. They then show no change through the rest of the decade. The situation could be far different, however, if a battle among the world's major oil producers over prices and market shares becomes a reality. And

while it is unclear where prices resulting from such a struggle would ultimately settle, the USSR would clearly be a major loser if prices fell by \$5-\$10 a barrel. As a rough rule of thumb, every \$1-fall in the price of oil costs the USSR \$450 million in hard currency revenues. On the other hand, the USSR as a raw materials supplier could derive some near term benefit from a boost in Western economic growth rates that could follow a reduction in global energy prices. On balance, however the USSR would be hurt far more than it would be helped by a decline in oil prices.

25X1

Outlook

Paradoxically, as Soviet domestic difficulties mount and economic growth slows, Moscow has been less willing to rely on economic ties with the West. Aversion to the rapid growth of hard currency debt in the mid-1970s led to a sharply slower growth in real imports--2 percent a year in 1977-82 compared with 17 percent a year in 1971-76--and restraints on new borrowing. Western trade sanctions following the Afghanistan invasion almost certainly dampened the enthusiasm of planners for relying on imports from the West, while the Polish crisis has reinforced the position of those opposing too much dependence on East-West trade.

25X1

In remarks to the Supreme Soviet in November 1981, State Planning Committee Chairman Baybakov implied that the volume of non-Communist country trade would grow by only 2.3 percent a year during 1981-85. This compares with just over 5 percent a year in 1976-80. Provisional estimates indicate that the five year trade

plan is about on schedule with the sharp rise in imports in 1981 and in exports in 1982. In a report to the November 1982 Supreme Soviet, Baybakov indicated that in 1983, trade with the non-Communist countries would be slightly above the level projected in the 1981-85 Plan. As shown in the accompanying tabulation, this implies a fall in this trade in 1983. 25X1

USSR: Planned and Actual Foreign Trade Volume

		(Percent)		
	1981-85	Actual		Plan
	Planned Average	1981	1982 ¹	1983
	Annual Growth			
World	4.1	4.5	3.9	2.5
Communist	5.5	2.3	3.7	7.7
Non-Communist	2.3	7.8	4.2	-4

¹ Estimated.

25X1

The more important question is whether Moscow is in a position to forgo the benefits which would accrue to the economy from expanding its trade with the West during the remainder of the 1980s. At a minimum, the USSR will want to import sufficient agricultural products to maintain some growth in consumption and to buy enough machinery and technology to meet priority investment goals. 25X1

Our projections suggest, however, that if oil revenues drop significantly, the USSR will be unable to increase real imports much, if at all, without a large runup in debt. Unfortunately, the need to trim import growth comes at a time when slower domestic growth is making resource allocation decisions more

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difficult year by year. Although it may try, the USSR probably cannot count on the East European countries for much help. While it could provide more consumer goods and a limited range of industrial and investment goods, Eastern Europe's capacity to provide significant assistance is limited by its own economic and financial problems.

25X1

The possibilities for expanding Soviet hard currency imports in the latter part of the decade and beyond are greater. Apart from the possibility that oil prices will again rise, the main questions concern West European imports of Soviet natural gas and both Soviet and Western policies concerning use of and access to Western credits. The Andropov administration, faced with severe economic difficulties, is likely to consider a wide range of economic policy alternatives, including steps to expand imports from the West in order to facilitate improvements in productivity and technology.

25X1

One way to increase hard currency imports would be to expand gas exports to Western Europe well beyond presently contracted amounts. When the East-West pipeline now being built is completed, it will have enough capacity for additional Soviet gas deliveries. Unless alternative sources are developed, West European gas demand should be sufficient to cover these additional deliveries in the late 1980s and early 1990s. Beyond that period, the Soviets have ample gas reserves to justify one or several additional gas pipelines of the size of the one under construction. The main constraint will be what Western Europe, and on a much smaller scale Japan, need and are willing to buy.

25X1

Western credits are a potential source of substantial additional Soviet hard currency imports, but only if Soviet debt policy becomes less conservative and Western governments provide encouragement and insurance to the lenders. The Soviet debt position is currently easily manageable--with a debt service to hard currency earnings ratio of 17 percent--and probably will remain so at least through 1985. Moscow could, if it wished, increase the debt service ratio substantially before it reached troublesome levels.

The main impact of an increase in Soviet hard currency earnings or credits would probably be on imports of Western machinery and equipment, which have declined substantially in recent years. Soviet imports of Western machinery and equipment now consist mainly of equipment for the oil, gas, chemical, and metallurgical industries. The main purpose of this equipment is to alleviate severe bottlenecks in the supply of fuels and key industrial materials. A substantial increase in hard currency receipts could mean a growth in imports of machinery and equipment large enough to significantly affect the modernization process. By the same token, a further decline in imports of machinery and equipment would make it even more difficult to reduce the kinds of severe bottlenecks that have been hampering Soviet economic growth.

25X1

Appendix Table 1
USSR: Hard Currency Imports¹

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u> ²
	(Millions of current US dollars) ²											
Total ³	2984	3,093	4,342	6,744	8,695	14,577	15,478	14,805	17,026	21,435	26,070	27,778
Grain	101	185	770	1,423	635	2,323	2,627	1,356	2,353	3,279	4,360	6,217
Other agricultural products	657	600	543	1,118	1,388	1,760	1,665	2,005	1,721	2,854	4,400	5,104
Machinery and equipment ⁴	967	960	1,283	1,739	2,334	4,593	5,074	5,117	5,970	6,032	6,039	4,523
Ferrous metals ⁵	303	374	498	899	1,942	2,627	2,296	1,819	2,588	3,536	3,606	3,597
Chemicals	215	206	249	270	707	722	609	658	815	1,190	1,545	1,590
Other ⁴	741	768	999	1,295	1,689	2,552	3,207	3,850	3,579	4,544	6,120	6,747
	(Millions of 1970 US dollars) ⁵											
Total ³	2,984	2,851	3,677	4,349	5,223	7,419	8,325	7,531	7,294	8,324	9,188	9,205
Grain	101	185	726	783	245	997	1,257	671	934	1,100	1,188	1,600
Other agricultural products	657	611	383	406	671	862	816	709	548	945	1,419	1,660
Machinery and equipment ⁴	967	946	1,150	1,353	1,622	2,700	2,929	2,829	2,716	2,513	2,350	1,675
Ferrous metals ⁴	303	220	327	593	1,095	1,055	1,170	945	1,151	1,474	1,383	1,305
Chemicals	215	204	245	233	501	448	363	302	340	430	573	575
Other ⁵	741	685	846	981	1,089	1,357	1,790	2,075	1,605	1,862	2,275	2,390

¹ Includes all countries trading with the Soviet Union on a hard currency basis as of 1 January 1980.

² Source: Official Soviet foreign trade statistics.

³ Includes the following imports which the U.S.S.R. reported in footnotes and which we believe are associated with the Orenburg natural gas pipeline: \$420 million in 1976, \$888 million in 1977, \$286 million in 1978, \$30 million in 1979, \$18 million in 1980 and zero in 1981.

⁴ Excluding imports associated with the Orenburg pipeline.

⁵ The constant price series was estimated by using actual quantity data where available (for example, for wheat and corn) or by deflating the value series by UN and other Western price indices for various commodity group.

Appendix Table 2
USSR: Hard Currency Exports¹

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
	(Millions of current US dollars) ²											
Total	2,424	2,776	2,954	5,009	7,869	8,280	10,225	11,863	13,336	19,417	23,584	23,788
Petroleum ³	430	608	600	1,304	2,741	3,391	4,748	5,583	5,710	9,585	11,995	12,200
Natural gas	14	21	24	32	95	220	358	566	1,072	1,404	2,704	3,968
Coal and coke	106	127	124	139	256	402	377	366	295	315	366	179
Machinery and equipment	193	207	267	360	398	647	803	905	1,299	1,574	1,466	1,534
Ferrous metals	137	131	130	216	236	164	171	181	129	216	246	169
Wood and wood products	389	379	421	747	1,046	739	889	1,084	991	1,370	1,500	1,016
Chemicals	64	65	70	110	246	243	198	215	287	542	746	770
Agricultural products	192	340	360	367	677	547	553	652	447	457	454	690
Diamonds ⁴	175	257	371	515	545	478	511	606	773	1,043	1,304	
Other	724	642	587	1,219	1,629	1,449	1,617	1,705	2,333	2,911	2,803	3,252
	(Millions of 1970 US dollars) ⁵											
Total	2,424	2,589	2,541	2,939	2,910	2,946	3,342	3,359	4,075	4,018	3,747	3,469
Petroleum	430	490	443	512	430	555	671	731	791	636	619	582
Natural gas	14	14	28	28	70	98	168	196	238	294	294	322
Coal and coke	106	81	80	85	93	88	91	90	70	65	59	25
Machinery and equipment	193	172	201	235	232	320	390	360	562	628	535	560
Ferrous metals	137	167	172	182	99	82	109	143	93	102	110	105
Wood and wood products	389	380	420	466	401	375	468	443	415	384	333	200
Chemicals	64	69	91	106	177	151	119	134	188	316	393	385
Agricultural products	192	330	227	153	249	252	200	229	144	111	106	160
Diamonds	175	252	346	359	315	282	284	291	376	380	376	
Other	724	634	533	813	844	743	842	742	1,198	1,102	922	1,130

¹ Includes all countries trading with the Soviet Union on a hard currency basis as of 1 January 1980.

² Source: Official Soviet foreign trade statistics.

³ These data were calculated by adding estimates for oil exports to those LDCs for which there are no Soviet data to the total calculated from Soviet statistics.

⁴ Source: OECD statistics.

⁵ The constant price series was estimated by using actual quantity data where available (for example, for oil and natural gas) or by deflating the value series by UN and other Western price indices for various commodity group.

Appendix Table 3

USSR: Equipment Orders Placed with Multilateral Trading Partners¹

(Millions of current US dollars)

	<u>Total</u>	<u>Of which: Equipment for Oil and Natural Gas Projects</u>
1970	500	
1971	850	
1972	1,700	325
1973	2,600	200
1974	4,300	600
1975 ²	4,650	525
1976 ²	6,000	1,700
1977	3,800	300
1978	2,800	825
1979	2,675	200
1980 ³	2,600	400
1981 ³	6,700	3,800
1982 ⁴	3,407	1,254

¹ Data on Soviet orders are collected from a variety of sources, including trade journals and Western newspapers.

² The value for 1976 includes roughly \$1 billion in orders for the Orenburg pipeline project.

³ The value for 1981 includes about \$4 billion in orders for the gas export pipeline project. Some of this--such as pipelayers--is included under categories other than oil and natural gas equipment.

⁴ Including about \$600 million in French and German equipment contracts for the Astrakhan' Gas Project. Because of lags in reporting, information for 1982 is incomplete.

25X1